Draft Maintenance Concept Remains Consistent with Prior Fiscal Year

STATEMENT OF WORK (SOW)

FOR THE CONVERSION OF THE

HS-400-3A1 TRANSMISSION NSN 2520-01-113-6132

HS-400-3A1 TRANSMISSION WITH CONTAINER NSN 2520-01-134-3891

> HS-400-3A1-1 TRANSMISSION NSN 2520-01-390-3750

HS-400-3A1-1 TRANSMISSION WITH CONTAINER NSN 2520-01-400-2206

TO THE

HS-525 TRANSMISSION NSN 2520-01-472-3051

AND THE

HS-525 TRANSMISSION WITH CONTAINER NSN 2520-01-472-6681 Statement of Work (SOW) for the Conversion of the Assault Amphibious Vehicle (AAV) HS-400-3A1 Transmission, NSN 2520-01-113-6132

HS-400-3A1 Transmission with Container, NSN 2520-01-134-3891 HS-400-3A1-1 Transmission, NSN 2580-01-390-3750

HS-400-3A1-1 Transmission with Container, NSN 2520-01-400-2206

to the

HS-525 Transmission, NSN 2520-01-472-3051 HS-525 Transmission with Container, NSN 2520-01-472-6681

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Attachment A GFM Parts Requirement to Convert HS400A1 to HS525

Statement of Work (SOW) for the Conversion of the Assault Amphibious Vehicle (AAV)
HS-400-3A1 Transmission, NSN 2520-01-113-6132
HS-400-3A1 Transmission with Container, NSN 2520-01-134-3891
HS-400-3A1-1 Transmission, NSN 2580-01-390-3750
HS-400-3A1-1 Transmission with Container, NSN 2520-01-400-2206
to the
HS-525 Transmission, NSN 2520-01-472-3051
HS-525 Transmission with Container, NSN 2520-01-472-6681

1.0 SCOPE. This Statement of Work (SOW), along with TM 8F152B-25&P/A dated Oct 98 establishes, sets forth tasks and identifies the work efforts that shall be performed by the Contractor in the conversion of the Assault Amphibious Vehicle (AAV) HS-400-3A1 Transmission, HS-400-3A1 Transmission with Container, HS-400-3A1-1 Transmission, and the HS-400-3A1-1 Transmission with Container to the HS-525 Transmission and HS-525 Transmission with Container (hereafter referred to as the HS-400 series Transmission and the HS-525 Transmission). This document contains minimum requirements for the conversion of the HS-400 series Transmission to a Condition Code "A" HS-525 Transmission. Condition Code "A" is defined as "serviceable/issuable without qualification, new, used, repaired or reconditioned material which is serviceable and issuable to all customers without limitations or restrictions, including materiel with more than six months shelf-life remaining". Upon completion of the conversion, the transmission will be identified as the HS-525 Transmission, NSN 2520-01-472-3051, or the HS-525 Transmission with Container, NSN 2520-01-472-6681. Transmission configurations will be without Power Take Off and Hydrostatic Steering Unit.

- 1.1 <u>Background</u>. Conversion is defined, as the maintenance process, which disassembles an item only to the extent, required to convert/modify it to the new configuration.
- 2.0 <u>APPLICABLE DOCUMENTS</u>. The following documents form a part of this SOW to the extent specified. Unless otherwise specified, the issues of these documents are those listed in the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto which is in effect on the date of solicitation. In the event of conflict between the documents referenced herein and the contents of this SOW, the contents of this SOW shall be the superseding requirement.

2.1 Military Standards

MIL-STD-129

DoD Standard Practice: Military Marking for

Shipment and Storage

MIL-STD-2073-1D(1)

DoD Standard Practice for Military Packaging

2.2 Other Government Documents and Publications

DoD 4000.25-1-M

Military Standard Requisitioning and Issue Procedures (MILSTRIP)

DoD 4160.21-M-1	Defense Demilitarization Manual
RS 3.4A	Rebuild Standards for the AAV7A1
TM 2350-45	DMA Standard Procedures
TM-8FI52B-25&P/A	Power Plant Assembly AAV7A1
MI 2350-25/83	Change Hose and Clamps on the Transmission
MI 2350-25/97	DDM Transducer Relocation
MI 2350-45/99	Retaining Bell Crank on Reverse Steering Mechanism
MI 2350-45/108	Transmission Tube Clamp
TI-990301	Installation and Assembly of the 525 HP Power Plant Assembly Integration Kit (Appendix A)
ECP M31369	Reduce Slot Opening in Transmission
ECP E5068	Change Engine and Transmission Drain Hose
ECP E5220	Introduction of the Improved, Reliable and Maintainable (IRAM) Transmission
834-002BW	Waiver Transmission Gasket
ECP 5343	Cover, Oil Supply Cast Iron
Engineering Drawing 2600087 CAGE 80064	Transmission Assembly HS-400-3A1
Engineering Drawing 6227600 CAGE 53711	HS-400-3A1-1 (Improved) Transmission Assembly Build-Up
Engineering Drawing 5419069 CAGE 53711	Overhaul/Conversion Data Plate
Engineering Drawing 7010146 CAGE 0MLM6	Transmission Assembly (HS-525)

Engineering Drawing 7010034

CAGE 0MLM6

Power Plant Assembly (HS-525)

Engineering Drawing 7010203

CAGE 0MLM6

Transmission Identification Plate (HS-525)

ASTM D 3951

Surface Protection Film

Military Handbooks (For Guidance)

MIL-HDBK-61

Configuration Management Guidance

2.3 <u>Industry Standards</u>

ANSI/ISO/ASQC Q9001-2000

Quality Management Systems – Requirements

Industry Standards (For Guidance)

ANSI/EIA-649

National Consensus Standards for Configuration

Management

Copies of Military Standards and Specifications are available from the DoD Single Stock Point, Document Automation and Production Service, Building 4/D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, commercial telephone number (215) 697-2179 or DSN 442-2179 or on the Internet at http://www.dodssp.daps.mil. Copies of other government documents and publications required by the Contractor's in connection with specific SOW requirements shall be obtained through the Contracting Officer: Contracts Department (Code 891), P.O. Drawer 43019, 814 Radford Blvd., Marine Corps Logistics Command, Albany, Georgia 31704-3019, commercial telephone number (229) 639-6761 or DSN 567-6761. Copies of engineering drawings, if applicable, shall be obtained from Supply Chain Management Center, Attn: Code 566-1A, 814 Radford Blvd., STE 20320, Albany, Georgia 31704-0320, commercial telephone number (229) 639-6476 or DSN 567-6476.

3.0 REQUIREMENTS

- 3.1 <u>General Tasks</u>. In fulfilling the specified requirements, the Contractor shall render, yet not be limited to the following tasks:
- a. Provide components, materials, labor, facilities, and services necessary to troubleshoot, test, diagnose, engineer, integrate, install, repair, rebuild, and calibrate as required to make the HS-400 series Transmissions fully operational as the HS-525 Transmission. Upon completion of the conversion the HS-525 Transmission shall be Condition Code "A". Pre-inspection and acceptance of the HS-400 series Transmission prior to conversion shall be conducted in accordance with TM 8FI52B-25&P/A.

- b. Conduct final-on-site testing, which shall be witnessed by Marine Corps Systems Command (MCSC), PMM143, Albany, Georgia representative.
- c. The Contractor shall be responsible for all structural, electrical, and mechanical requirements associated with the conversion of the HS-400 series Transmissions as specified in TM 8F152B-25&P/A, RS 3.4A, and this SOW.
- d. Ensure all HS-400 series Transmissions meet the configuration of Engineering Drawing 2600087, CAGE 80064. The HS-400 series Transmission will be minus the Hydrostatic Steering Unit (HSU) and Power Take Off (PTO). Remove the torque converter (PN 2600146) from the 400 series transmission, clean, drain, and prepare for storage. Replace with the new HS-525 torque converter (PN 7010161) to be provided as GFM. Request disposition instructions for the torque converter (PN 2600146) from Supply Chain Management Center, Materiel and Distribution Management Department, Secondary Items Management Branch (CBG/CSLE), Secondary Items Section (Code 584-2), 814 Radford Blvd., STE 20320, Marine Corps Logistics Command, Albany, Georgia 31704-0320.
- e. All mandatory replacement parts shall be replaced in accordance with TM 8F152B-25&P/A, 834-002BW and TI-990301. Economically repairable replacement parts may be reused if they meet the applicable inspection requirements in TM 2350-45. All parts shall be disposed of in accordance with DoD 4160.21-M-1.
- 3.2 <u>Detailed Tasks</u>. The following tasks describe the different phases for the conversion of the HS-400 series Transmissions to the HS-525 Transmission.
- 3.2.1 <u>Phase I -Conversion</u>. The Contractor shall receive HS-400 series Transmission for conversion. The Contractor shall then disassemble the HS-400 series Transmission into components and conduct the conversion process. The Contractor shall reconfigure components in accordance with the requirements in TM-8F152B-25&P/A, TI-990301, and this SOW. The Contractor shall be responsible for supplying all equipment, tools, test equipment, and materials, with the exception of GFM (see Attachment A) for the conduct of this effort. The Contractor shall be responsible for the integration and assembly of all components. All Modification Instructions (MIs) and Engineering Change Proposals (ECPs), MI 2350-25/83, MI 2350-25/97, MI 2350-45/99, and MI-2350-45/108, ECP M31369, ECP E5068, ECP E5220, and ECP 5343 shall be applied during the conversion process. The existing Transmission Data Plate shall be replaced. Data Plate, Engineering Drawing 7010203, CAGE 0MLM6, shall be manufactured and installed. The configuration identification for the HS-525 Transmission is defined by the specifications annotated on current revision levels of Engineering Drawing 7010146, CAGE 0MLM6.
- 3.2.1.1 Overhaul/Conversion Data Plate. Upon completion of the conversion process, the Contractor shall install Overhaul/Conversion Data Plates, Engineering Drawing 5419060, CAGE 53711, as identified in DMA Standards Procedure 20 of TM 2350-45 on the transmission. The overhaul/conversion data plate shall mark the NSN, part number and serial number, repair Contractor, and date the component was completed.

3.2.2 Phase II - Inspection, Testing and Acceptance

- a. Upon completion of the conversion process, the Contractor shall be required to test each HS-525 Transmission on a dynamometer to verify system operability. Requirements for the dynamometer test are provided in TM-8F152B-25&P/A. The MCSC (PMM143), Albany, Georgia representatives will be notified three working days prior to all dynamometer testing and can witness this testing. Failure of the HS-525 Transmission to meet the dynamometer test requirements shall be grounds for rejection of the unit. Any units rejected shall be reworked and resubmitted for dynamometer testing and acceptance. The Contractor shall be responsible for correcting any deficiencies identified during testing. The MCSC (PMM143), Albany, Georgia representative may require the Contractor to repeat tests, or portions thereof, if the original tests fail to demonstrate compliance with this SOW.
- b. The HS-525 Transmission will be assigned a six-digit serial number. Procedures for assigning serial numbers are as follows: The first digit will identify the Contractor (A=Albany Ga), (B=Barstow Ca). The next four digits represents the Julian Date in which the transmission was green tagged, cost work center final (9001). There shall be only one transmission per Julian date at each Contractor site. The final digit represents the Model upgrade (E=HS-525 Transmission). Examples A9001E or B9001E.
- c. The performance of the Contractor and the quality of work delivered, including all documentation of material written or compiled, shall be subject to in-process review and inspection during performance. Inspection may be accomplished in-plant or at any work site. The MCSC (PMM143), Albany, Georgia representative shall be permitted to observe the work and/or to conduct inspections at any reasonable hour within Contractor's normal working hours. Final inspection and acceptance shall be at the Contractor's facility.
- d. Final inspection, testing and acceptance of each HS-525 Transmission (with/without container) shall be conducted in accordance TM-8F152B-25&P/A.
- e. Failure to comply with any of the specified requirements listed herein shall be reason for rejection by the MCSC (PMM143), Albany, Georgia representative. The Contractor shall, at no additional cost to the Marine Corps, provide the following:
 - (1) Develop an approach for the correction of all deficiencies.
- (2) Upon approval by the MCSC (PMM143), Albany, Georgia representative, the Contractor shall correct the deficiencies and repeat the verification until an acceptable compliance with acceptance test procedure requirements is demonstrated.

3.2.3 Phase III - Packaging, Handling, Storage and Transportation (PHS&T)

a. Upon conversion completion the Contractor shall be responsible for preservation and packaging of item(s) under the terms of this SOW. Items without containers scheduled for shipment to long-term storage or overseas shipment shall be in accordance with Level "A"

shipment to long-term storage or overseas shipment shall be in accordance with Level "A" requirements of MIL-STD-2073-1D(1), Method 54. Items with containers scheduled for shipment to long-term storage or overseas shipment shall be in accordance with Level "A" requirements of MIL-STD-2073-ID(1), Method 55. Items scheduled for domestic shipment for immediate use shall be in accordance with the best commercial practices of ASTM D 3951. Items scheduled for overseas shipment for immediate use shall be in accordance with the best commercial practices of ASTM D 3951, paragraph 6.1, Export Requirements.

NOTE: Level preservation and packaging shall normally be required due to long-term storage requirements. The Logistics Management Specialist (MCSC, PMM143), Albany, Georgia shall identify exceptions in writing.

- b. Marking for shipment and storage shall be in accordance with MIL-STD-129.
- c. The Marine Corps will provide the Contractor with the shipping address(es) for delivery of the converted equipment, and the Contractor shall be responsible for arranging for shipment to the predesignated site(s). The Marine Corps will be responsible for transportation cost associated with the shipping the subject equipment to and from the Contractor.

3.3 Configuration Control

- a. The Contractor shall apply configuration control procedures to established configuration items. The Contractor shall not implement configuration changes to an item's documented performance or design characteristics without prior written authorization. If deemed necessary to temporarily depart from the authorized configuration, the Contractor shall prepare and submit a Request For Deviation (RFD). MIL-HDBK-61 and ANSI/EIA-649 provide guidance for preparing RFDs.
- b. The creation and submission of RFDs shall be accomplished using MEARS CREATE software, which resides at a secure web site, https://mears1.redstone.army.mil. For the purpose of gaining access to the web site, the Contractor shall request user-id and password privileges from the Requiring Office identified in Block 6 of the applicable Contract Data Requirements List. The Contractor shall direct technical or functional questions concerning usage of MEARS CREATE software to the Requiring Office for guidance. The Contractor shall notify the Requiring Office by electronic mail when completed MEARS RFDs are ready for formal submission.
- 3.4 Government Furnished Equipment (GFE)/Government Furnished Materiel (GFM). The Management Control Activity (MCA) (Code 581-1B) will coordinate GFE/GFM requests and maintain a central control system on all government owned assets in the Contractor's possession. The MCA will forward a GFE Accountability Agreement to the Contractor for signature on an annual basis to establish a chain of custody and property responsibility for Marine Corps assets. The Contractor is to acknowledge receipt of GFM to the MCA within 15 days of receipt. This can be done by mailing a copy of the DD 1348 to: Materiel and Distribution Management Department, Distribution Management Branch, Management Control Activity

(Code 581-1B), 814 Radford Blvd., STE 20320, Albany, Georgia 31704-0320 or faxing a copy to commercial telephone number (229) 639-5498 or DSN 567-5498. If Depot Source of Repair (DSOR) mandated, assets at repair will not be considered GFE/GFM.

- 3.4.1 Government Furnished Equipment. Each Contractor will receive (1) Hydrostatic Steering Unit (HSU) and (1) Power Take Off Unit (PTO) in Condition Code "A" for the HS-525 Transmission conversion process. The HSU and the PTO shall be returned in Condition Code "A" to Supply Chain Management Center, Materiel and Distribution Management Department, Secondary Items Management Branch (CBG/CSLE), Secondary Items Section (Code 584-2), 814 Radford Blvd., STE 20320, Marine Corps Logistics Command, Albany, Georgia 31704-0320.
- 3.4.2 Government Furnished Materiel. Request will be submitted to Supply Chain Management Center, Materiel and Distribution Management Department, Secondary Items Management Branch (CBG/CSLE), Secondary Items Section (Code 584-2), 814 Radford Blvd., STE 20320, Marine Corps Logistics Command, Albany, Georgia 31704-0320, commercial telephone number (229) 639-5590/91 or DSN 567-5590/91. The below listed material is available:

Nomenclature	Part Number	Quantity Per Application
a. 65 Tooth Gear	710170A	1 Ea
b. 62 Tooth Gear	710203A	1 Ea
c. Reaction Plates (Steel)	206177M	16 Ea
d. Reaction Plates (Poly)	206178D	16 Ea
e. Cover, Oil Supply	2584769-3 (sm)	2 Ea
f. Cover, Oil Supply	2584713-2 (lg)	1 Ea
g. Torque Converter	7010161	1 Ea
h. Parts Requirements List	Appendix A	

3.5 <u>Contractor Furnished Materiel (CFM)</u>. The Contractor may requisition materiels as required in the performance of this SOW through the DoD Supply System. DoD 4000.25-1-M (MILSTRIP), Chapter 11, provides guidance to the Contractors on the requisitioning process. The decision to utilize CFM procured from the DoD Supply System shall be based upon cost effectiveness, availability of materiel and the required completion/delivery date.

3.6. Quality Assurance Provisions

3.6.1 The performance of the Contractor's quality of work performed, material provided and documents written shall be subject to in-process review and inspection by the MCSC (PMM143),

Albany, Georgia representative during contract performance. Inspection may be accomplished at any work location. The MCSC (PMM143), Albany, Georgia representative shall be permitted to observe the work/tasks accomplishment and/or to conduct inspections at any reasonable hour within Contractor's normal working hours. Acceptance Tests shall be held in-plant. The MCSC (PMM143), Albany, Georgia representative requires, at a minimum, two weeks notification of acceptance test to allow for sufficient time for MCSC (PMM143), Albany, Georgia representative to witness acceptance. Inspection by the MCSC (PMM143), Albany, Georgia representative of all acceptance tests, materiels and associated lists furnished hereunder does not relieve the Contractor from any responsibility regarding defects or other failures to meet the SOW requirements which may be disclosed prior to final acceptance.

- 3.6.2 The Contractor shall provide and maintain a Quality System that, as a minimum, adheres to the requirements of ANSI/ISO/ASQC Q9001-2000, Quality Management Systems Requirements. The Contractor's work shall be subject to in-process reviews and inspections for compliance with these procedures and standards by MCSC (PMM143), Albany, Georgia representative. Noncompliance with these quality assurance procedures resulting in degraded quality of work may result in a stop-work order requiring action by the Contractor to correct the work performed and to enforce compliance with quality assurance procedures or face contract termination. Notwithstanding such inspection, it shall be the Contractor's responsibility to ensure that the entire system meets the performance requirements of this SOW.
- 4.0 <u>REPORTS</u>. All report deliverables shall be submitted in hard copy to Commanding General, Marine Corps Systems Command, Attn: PMM143, 814 Radford Blvd, STE 20343, Albany, Georgia 31704-0343, unless directed otherwise in a Contract Data Requirements List.
- 4.1 <u>Monthly Production Status Report</u>. A monthly Production Status Report shall be submitted summarizing the progress and status of the HS-525 Transmission.

Government Furnished Materiel Parts Requirement to convert HS400A1 to HS525

Fig No.	Iten No.	Part Number	Description	LIM	IN UNIT	box total
6-28	1	MS35764-1295	Bolt, self-locking, (HS 525 only)	ea	8	88
6-28	10	1281976	Washer,flat	ea	26	286
6-28	11	MS51968-8	nut, plain, hex	ea	2	22
6-28	12	MS27183-14	Washer, flat (HS 525 only)	ea	2	22
6-28	14+	2584399	Gasket	ea	1	11
6-28	15+	MS28775-111	Packing	ea	1	11
6-28	16	MS28775-113	Packing	ea	1	11
6-28	17+	MS28775-116	Packing	ea	1	11
6-28	18	MS28775-123	Packing	ea	2	22
6-28	2	10910174-3	WASHER FLAT	ea	8	88
6-28	4	2584199	Gasket	ea	1	11
6-28	6+	2601020	Grommet	ea	1	11
6-28	7+	2601053	Grommet	ea	1	11
6-28	8+	2601019	Grommet	ea	1	11
6-28	9	MS35764-1297	Bolt, self-locking	ea	26	286
Fig No.	Iten No.	Part Number	<u>Description</u>	<u>UM</u>	IN UNIT	box total
6-29	1	MS35764-1295	Bolt, self-locking	ea	8	88
6-29	10	2584543	Gasket	ea	2	22
6-29	2	10910174-3	Washer, flat	ea	8	88
6-29	4	2584576	Gasket	ea	2	22
6-29	5	2587662	Ring	ea	2	22
6-29	7	MS35764-1297	Bolt, self-locking	ea	56	616
6-29	8	10910174-3	Washer, flat	ea	56	616
Fig No.	<u>iten No.</u>	Part Number	<u>Description</u>	<u>UM</u>	IN UNIT	box total
6-37	30	MS28775-223	Packing	ea	1	11
6-37	33	MS35764-1295	Screw, self-locking	ea	4	44
6-37	56	MS28775-219	Packing	ea	1	11
6-37	71	MS27183-14	Washer, flat (HS 525 only)	ea	3	33
6-37	89	MS27183-14	Washer, flat (HS 525 only)	ea	2	22
6-37	91	2584302	Gasket	ea	1	11
6-37	88	MS35764-1293	Bolt, self-locking, (HS 525 only)	ea	2	22
Fig No.	Iten No.	Part Number	Description	UM	IN UNIT	box total
6-50	10	,MS27183-12	Washer, Flat	ea	14	154
6-50	12	7010256	Gasket	ea	1	11
6-50	9	B1821BH031C300N	Bolt, Machine (HS525 only)	ea	14	154
Fig No.	Iten No.	Part Number	Description	<u>UM</u>	IN UNIT	box total
6-51	2	MS51095-335	Bolt, Self, Locking (HS525)	ea	7	77
6-51	3	MS27183-12	Washer, Flat	ea	7	77
6-51	5	2588664	Gasket	ea	1	11
Fig No.	Iten No.	Part Number	Description	_	IN UNIT	box total
6-53	10	MS35764-1293	Screw, self-locking	ea	8	88
6-53	13	2584303	Gasket, non-asbestos	ea	1	11
6-53	2	MS90725-71	Screw, cap (HS 525 only)	ea	4	44
6-53	24	MS21318-8	Screw, drive	ea	4	44
6-53	25	7010203	Plate, identification (HS 525 only)	ea	1	11
6-53	5	MS28775-216	Packing, performed	ea	2	22
6-53	6	MS28775-114	Packing, performed	ea	2	22
6-53	7	MS28775-110	Packing, performed	ea	2	22
	0	14000775 044		10.0	14	
6-53	8	MS28775-214	Packing, performed	ea	1	11
6-53 6-53	9	MS28775-230	Packing, performed	ea	1	11
6-53 6-53 Fig No.	9 Iten No.	MS28775-230 Part Number	Packing, performed Description	ea UM	1 IN UNIT	11 box total
6-53 6-53 Fig No. 6-54	9 <u>Iten No.</u> 10	MS28775-230 Part Number MS35307-308	Packing, performed Description Screw, cap (HS 525 only)	ea UM ea	1 IN UNIT 4	11 box total 44
6-53 6-53 Fig No. 6-54 6-54	9 Iten No. 10	MS28775-230 Part Number MS35307-308 MS27183-10	Packing, performed Description Screw, cap (HS 525 only) Washer, flat	ea UM ea ea	1 IN UNIT 4 4	11 box total 44 44
6-53 6-53 Fig No. 6-54 6-54 6-54	9 Iten No. 10 11 13	MS28775-230 Part Number MS35307-308 MS27183-10 2584133	Packing, performed Description Screw, cap (HS 525 only) Washer, flat Gasket	ea UM ea ea ea	1 IN UNIT 4 4 1	11 <u>box total</u> 44 44 11
6-53 6-53 Fig No. 6-54 6-54 6-54 6-54	9 Iten No. 10 11 13 2	MS28775-230 Part Number MS35307-308 MS27183-10 2584133 MS35307-308	Packing, performed Description Screw, cap (HS 525 only) Washer, flat Gasket Screw, cap (HS 525 only)	ea UM ea ea ea ea	1 IN UNIT 4 4 1 4	11 box total 44 44 11 44
6-53 6-53 Fig No. 6-54 6-54 6-54 6-54 6-54	9 Iten No. 10 11 13 2 3	MS28775-230 Part Number MS35307-308 MS27183-10 2584133 MS35307-308 MS27183-10	Packing, performed Description Screw, cap (HS 525 only) Washer, flat Gasket Screw, cap (HS 525 only) Washer, flat	ea UM ea ea ea ea ea	1 IN UNIT 4 4 1 4 4	11 box total 44 44 11 44 44
6-53 6-53 Fig No. 6-54 6-54 6-54 6-54 6-54 6-54	9 Iten No. 10 11 13 2 3 5	MS28775-230 Part Number MS35307-308 MS27183-10 2584133 MS35307-308 MS27183-10 2584033	Packing, performed Description Screw, cap (HS 525 only) Washer, flat Gasket Screw, cap (HS 525 only) Washer, flat Gasket	ea UM ea ea ea ea ea ea	1 IN UNIT 4 4 1 4 4 4 1 1	11 box total 44 44 11 44 44 11
6-53 6-53 Fig No. 6-54 6-54 6-54 6-54 6-54 6-54 Fig No.	9 Iten No. 10 11 13 2 3 5 Iten No.	MS28775-230 Part Number MS35307-308 MS27183-10 2584133 MS35307-308 MS27183-10 2584033 Part Number	Packing, performed Description Screw, cap (HS 525 only) Washer, flat Gasket Screw, cap (HS 525 only) Washer, flat Gasket Description	ea UM ea ea ea ea ea ea UM	1 IN UNIT 4 4 1 4 4 4 1 IN UNIT	11 box total 44 44 11 44 44 11 box total
6-53 6-53 Fig No. 6-54 6-54 6-54 6-54 6-54 6-54	9 Iten No. 10 11 13 2 3 5	MS28775-230 Part Number MS35307-308 MS27183-10 2584133 MS35307-308 MS27183-10 2584033	Packing, performed Description Screw, cap (HS 525 only) Washer, flat Gasket Screw, cap (HS 525 only) Washer, flat Gasket	ea UM ea ea ea ea ea ea	1 IN UNIT 4 4 1 4 4 4 1 1	11 box total 44 44 11 44 44 11

Government Furnished Materiel Parts Requirement to convert HS400A1 to HS525

6-60	18	2584378	Gasket	-03	1	11
6-60	2	MS35764-1297	Bolt, self-locking, (HS 525 only)	ea	12	132
6-60	22	MS28778-6	Packing, performed	+	2	22
				ea		
6-60	27	MS35764-1295	Bolt, self-locking, (HS 525 only)	ea	7	77
6-60	28	MS27183-14	Washer, Flat	ea	4	44
6-60	3	MS27183-14	Washer, Flat	ea	12	132
6-60	30	2584380	Gasket	ea	1	11
6-60	31	MS35764-1295	Bolt, self-locking	ea	6	66
6-60	32	25847169-3	Cover, oil supply	ea	1	11
6-60	33	2584379	Gasket	ea	1	11
6-60	37	MS28778-6	Packing, performed	ea	2	22
6-60	38	2587067	Ring, retaining	ea	1	11
6-60	39	MS35764-1293	Bolt, self-locking	ea	6	66
6-60	40	10910174-3	Washer, Flat	ea	6	66
6-60	42	2584414	Gasket	ea	1	11
Fig No.	Iten No.	Part Number	Description	UM	IN UNIT	box total
6-64	10	MS35764-1297	Bolt, Self locking, (HS525 ONLY)	ea	6	66
6-64	11	MS27183-14	Washer, Flat	ea	6	66
6-64	2	MS35764-1297	Bolt, Self locking, (HS525 ONLY)	ea	6	66
6-64	21	MS35764-1297	Bolt, Self locking, (HS525 ONLY)	+	6	66
6-64	22	MS27183-14		ea	6	
6-64	29	MS35764-1297	Washer, Flat	ea		66
			Bolt, Self locking, (HS525 ONLY)	ea	6	66
6-64	3	MS27183-14	Washer, Flat	ea	6	66
6-64	30	MS27183-14	Washer, Flat	ea	6	66
6-64	37	MS35764-1297	Bolt, Self locking, (HS525 ONLY)	ea	6	66
6-64	42	MS27183-14	Washer, Flat	ea	6	66
	<u>Iten No.</u>	Part Number	Description	<u>UM</u>	IN UNIT	box total
6-66	11	MS27183-14	Washer, Flat	ea	4	44
6-66	3	2584769-3	Cover, Oil Supply (HS525)	ea	1	11
6-66	1	2587067	Ring, retaining	ea	1	11
6-66	10	MS35764-1295	Bolt, self-locking, (HS 525 only)	ea	4	44
6-66	13	2584380	Gasket	ea	1	11
6-66	14	MS51045-43	Setscrew	ea	1	11
6-66	18	MS35764-1299	Bolt, self-locking, (HS 525 only)	ea	6	66
6-66	19	MS27183-14	Washer, Flat	ea	6	66
6-66	2	MS35764-1295	Bolt, self-locking	ea	6	66
6-66	21	2584381	Shim	ea	2	22
6-66	23	2584342	Shim	ea	2	22
6-66	24	8340190	Bearing, roller	ea	2	22
6-66	28	MS35764-1307	Bolt, self-locking	ea	3	33
6-66	29	10910174-3	Washer, Flat	ea	3	33
6-66	30	MS35764-1297	Bolt, self-locking	ea	31	341
6-66	31	10910174-3	Washer, Flat		31	341
6-66	33	258304	Gasket	ea	1	11
6-66	4	2584379		ea		
	4	2004079	Gasket	ea	1	11 box total
Fig No.	Man No	Down Marinahau	Description			DOX TOTAL
	Iten No.	Part Number	Description		IN UNIT	
6-72	2	MS27183-14	Washer, flat (HS 525 only)	ea	5	55
6-72 6-72	2 4	MS27183-14 7010259	Washer, flat (HS 525 only) Gasket	ea ea	5 1	55 11
6-72 6-72 Fig No.	2 4 Iten No.	MS27183-14 7010259 Part Number	Washer, flat (HS 525 only) Gasket Description	ea ea <u>UM</u>	5 1 IN UNIT	55 11 <u>box total</u>
6-72 6-72 Fig No. 6-86	2 4 <u>Iten No.</u> 14	MS27183-14 7010259 Part Number 2584321	Washer, flat (HS 525 only) Gasket Description Shim	ea ea	5 1 IN UNIT	55 11 <u>box total</u> 11
6-72 6-72 Fig No. 6-86 6-86	2 4 <u>Iten No.</u> 14 15	MS27183-14 7010259 Part Number 2584321 2584321	Washer, flat (HS 525 only) Gasket Description Shim Shim	ea ea <u>UM</u>	5 1 <u>IN UNIT</u> 1	55 11 box total 11
6-72 6-72 Fig No. 6-86 6-86 6-86	2 4 Iten No. 14 15 16	MS27183-14 7010259 Part Number 2584321 2584321 M2923	Washer, flat (HS 525 only) Gasket Description Shim Shim Bearing, cone	ea ea <u>UM</u> ea	5 1 IN UNIT 1 1	55 11 box total 11 11
6-72 6-72 Fig No. 6-86 6-86 6-86 6-86	2 4 Iten No. 14 15 16 20	MS27183-14 7010259 Part Number 2584321 2584321 M2923 211601	Washer, flat (HS 525 only) Gasket Description Shim Shim Bearing, cone Bearing spacer	ea ea UM ea ea	5 1 <u>IN UNIT</u> 1	55 11 box total 11 11 11
6-72 6-72 Fig No. 6-86 6-86 6-86	2 4 Iten No. 14 15 16 20 21	MS27183-14 7010259 Part Number 2584321 2584321 M2923	Washer, flat (HS 525 only) Gasket Description Shim Shim Bearing, cone Bearing spacer Bearing, cone	ea ea UM ea ea ea	5 1 IN UNIT 1 1	55 11 box total 11 11
6-72 6-72 Fig No. 6-86 6-86 6-86 6-86	2 4 Iten No. 14 15 16 20	MS27183-14 7010259 Part Number 2584321 2584321 M2923 211601	Washer, flat (HS 525 only) Gasket Description Shim Shim Bearing, cone Bearing spacer Bearing, cone Separator spring	ea ea UM ea ea ea ea	5 1 IN UNIT 1 1 1	55 11 box total 11 11 11
6-72 6-72 Fig No. 6-86 6-86 6-86 6-86 6-86	2 4 Iten No. 14 15 16 20 21	MS27183-14 7010259 Part Number 2584321 2584321 M2923 211601 M2923	Washer, flat (HS 525 only) Gasket Description Shim Shim Bearing, cone Bearing spacer Bearing, cone Separator spring	ea ea UM ea ea ea ea ea	5 1 IN UNIT 1 1 1 1	55 11 box total 11 11 11 11 11
6-72 6-72 Fig No. 6-86 6-86 6-86 6-86 6-86 6-86	2 4 Iten No. 14 15 16 20 21 29	MS27183-14 7010259 Part Number 2584321 2584321 M2923 211601 M2923 212327A	Washer, flat (HS 525 only) Gasket Description Shim Shim Bearing, cone Bearing spacer Bearing, cone Separator spring Reaction plate (HS 525 only)	ea ea ea ea ea ea ea ea	5 1 IN UNIT 1 1 1 1 1 1 4 8	55 11 box total 11 11 11 11 11 44 88
6-72 6-72 Fig No. 6-86 6-86 6-86 6-86 6-86 6-86 6-86	2 4 Iten No. 14 15 16 20 21 29 31 33	MS27183-14 7010259 Part Number 2584321 2584321 M2923 211601 M2923 212327A 206178D 206177M	Washer, flat (HS 525 only) Gasket Description Shim Shim Bearing, cone Bearing spacer Bearing, cone Separator spring Reaction plate (HS 525 only) Friction plate (HS 525 only)	ea ea ym ea ea ea ea ea ea ea	5 1 IN UNIT 1 1 1 1 1 1 4 8 8	55 11 box total 11 11 11 11 11 44 88 88
6-72 6-72 Fig No. 6-86 6-86 6-86 6-86 6-86 6-86 6-86 6-8	2 4 Iten No. 14 15 16 20 21 29 31 33 34	MS27183-14 7010259 Part Number 2584321 2584321 M2923 211601 M2923 212327A 206178D 206177M M2923	Washer, flat (HS 525 only) Gasket Description Shim Shim Bearing, cone Bearing spacer Bearing, cone Separator spring Reaction plate (HS 525 only) Friction plate (HS 525 only) Bearing, cone	ea	5 1 IN UNIT 1 1 1 1 1 4 8 8 8	55 11 box total 11 11 11 11 11 44 88 88 88
6-72 6-72 Fig No. 6-86 6-86 6-86 6-86 6-86 6-86 6-86 6-8	2 4 Iten No. 14 15 16 20 21 29 31 33 34 38	MS27183-14 7010259 Part Number 2584321 2584321 M2923 211601 M2923 212327A 206178D 206177M M2923 211601	Washer, flat (HS 525 only) Gasket Description Shim Shim Bearing, cone Bearing spacer Bearing, cone Separator spring Reaction plate (HS 525 only) Friction plate (HS 525 only) Bearing, cone Bearing, cone	ea	5 1 IN UNIT 1 1 1 1 4 8 8 8 1	55 11 box total 11 11 11 11 11 44 88 88 88 11
6-72 6-72 Fig No. 6-86 6-86 6-86 6-86 6-86 6-86 6-86 6-8	2 4 Iten No. 14 15 16 20 21 29 31 33 34	MS27183-14 7010259 Part Number 2584321 2584321 M2923 211601 M2923 212327A 206178D 206177M M2923	Washer, flat (HS 525 only) Gasket Description Shim Shim Bearing, cone Bearing spacer Bearing, cone Separator spring Reaction plate (HS 525 only) Friction plate (HS 525 only) Bearing, cone	ea	5 1 IN UNIT 1 1 1 1 1 4 8 8 8	55 11 box total 11 11 11 11 11 44 88 88 88

Government Furnished Materiel Parts Requirement to convert HS400A1 to HS525

6-86	47	212327A	Separator spring	ea	4	44
6-86	49	206178D	Reaction , Plate (HS525 ONLY)	ea	8	88
6-86	51	206177M	Friction plate (HS 525 only)	ea	8	88
6-86	54	M2074Q	Packing	ea	1	11
6-86	56	M-1904-BB	Piston ring	ea	1	11
6-86	57	M-1904-BB	Piston ring	ea	1	11
6-86	58	A2622AD	Retaining ring	ea	1	11
6-86	60	A2622AD	Retaining ring	ea	1	11
6-86	62	7010126	Seal cast iron	ea	3	33
6-86	64	M2074CH	Gasket	ea	1	11
Fig No.	Iten No.	Part Number	Description	UM	IN UNIT	box total
6-91	52	7010126	Seal cast iron	ea	3	33
Fig No.	Iten No.	Part Number	Description	<u>UM</u>	IN UNIT	box total
6-94	5	7010235	Spur gear (HS 525 only)	ea	1	11
6-94	53	7010126	Seal cast iron	ea	3	33